CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-023
NPDES NO. CA0038679

WASTE DISCHARGE REQUIREMENTS FOR:

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY (LAVWMA)
INTERMITTENT WET WEATHER DISCHARGE
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. LAVWMA, hereinafter the discharger, by application dated July 27, 1998, has applied for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

2. LAVWMA is Joint Powers Agency (JPA) created for wastewater management planning for the service areas of Livermore, Pleasanton, and the Dublin San Ramon Services District (DSRSD). The LAVWMA member agencies, DSRSD and the City of Livermore, separately own and operate collection and treatment facilities for domestic, commercial, and industrial wastewater. DSRSD and City of Livermore are currently regulated by Order Nos. 94-074 (NPDES No. CA0037613) and 94-073 (NPDES No. CA0038008) respectively. By contractual agreement, DSRSD is responsible for operating and maintaining the LAVWMA export pipeline, pump station, and dechlorination facility. LAVWMA currently discharges treated wastewater from its member agencies to the East Bay Dischargers Authority (EBDA) system.

3. By contractual agreement, EBDA transports LAVWMA treated wastewater jointly with the treated wastewater from its member agencies to its dechlorination station near the San Leandro Marina (Marina Dechlorination Facility) and thence to its deepwater outfall in Lower San Francisco Bay. The existing capacity of the 16-mile long LAVWMA pipeline is 21 mgd. The prior waste discharge requirements (Order No. 96-009) permit LAVWMA to discharge 1.28 mgd of treated wastewater during extreme wet weather events to San Lorenzo Creek.

4. The discharger has conducted engineering studies and selected the LAVWMA Export Pipeline Facilities Project (Project) based on input from stakeholders, including Regional Water Board and Alameda County Water District. On June 25, 1998, the discharger certified the LAVWMA Export Pipeline Facilities Project Environmental Impact Report pursuant to the California Environmental Quality Act. The purpose of the Project is to manage increased flows in the discharger's service area. The Project involves increasing the LAVWMA pipeline capacity from 21 to 41.2 mgd. The Project also includes equalization storage to manage wet weather flows and optimize discharge to the EBDA pipeline and reduce discharge at locations other than the EBDA deepwater outfall. The EBDA-

LAVWMA contract allows up to 41.2 mgd discharge by LAVWMA into EBDA facilities, but the contract requires LAVWMA discharge to EBDA to be reduced to 19.72 mgd during extreme wet weather. The discharger's engineering studies concluded that wet weather discharges will occur at two locations as described in Findings 7 and 9.

PURPOSE OF ORDER

5. This Order allows seasonal discharge of secondary effluent to San Lorenzo Creek, and secondary effluent and reverse osmosis-treated effluent to Alamo Canal. Discharge at these locations occurs as the result of extreme wet weather events that have been characterized in the discharger's engineering studies. Extreme wet weather events increase wastewater flow beyond the capacity of the EBDA deepwater outfall pipeline system, which results in a discharge to San Lorenzo Creek approximately every 5 years. Prior to Project completion in approximately 2003, extreme wet weather events will increase wastewater flow beyond the capacity of the Livermore-Amador Valley export pipeline, which could result in a discharge of reverse osmosis-treated effluent to Alamo Canal approximately every 1 to 2 years and will result in discharge of secondary effluent to Alamo Canal approximately every 5 years. When the Project is constructed, the frequency of discharge to Alamo Canal will be reduced to occur no more frequently than approximately once in every 20 years.

SAN LORENZO CREEK DISCHARGE

6. The discharge to San Lorenzo Creek from the LAVWMA dechlorination facility is a surface discharge at a point located westerly of Lewelling Boulevard where the Southern Pacific Railroad bridge crosses San Lorenzo Creek, at Latitude 37°, 40', 30", and Longitude 122°, 09', 14".

7. The discharger proposes to seasonally discharge up to 21.5 million gallons per day (mgd) of secondary treated, chlorinated and dechlorinated wastewater to San Lorenzo Creek as necessary to accommodate EBDA capacity limitations. The expected maximum duration of this discharge is approximately five consecutive days during extreme wet weather. Prior to Project implementation, discharge to San Lorenzo Creek at a rate of 1.28 mgd is estimated to occur once every five years. Discharge may occur at a rate exceeding 1.28 mgd but less than 21 mgd (existing LAVWMA pipeline capacity) due to wet weather EBDA capacity limitations, but this would occur relatively infrequently. After Project implementation, a 5-day average discharge rate of up to 21.5 mgd is expected approximately once every four to five years. Discharge rate increases at the five-year recurrence interval after Project implementation to minimize discharge at the Alamo Canal, which is further from the Bay and tributary to a drinking water supply.

ALAMO CANAL DISCHARGE

8. The discharge to Alamo Canal from the LAVWMA dechlorination facility is a surface discharge at a point located at the southwest corner of the DSRSD treatment plant in Pleasanton, at Latitude 37° 41' 10'', and Longitude 121° 54' 54''. Alamo Canal is a trapezoidal flood channel in the Alameda Creek watershed. Initial dilution of greater than 10:1 is expected.

9. Prior to Project implementation, one secondary effluent overflow event is estimated to occur every four to five years. The estimated secondary effluent discharge volume from the five-year event is approximately 30 million gallons (MG). The estimated reverse osmosis-treated effluent discharge volume from this event could be up to approximately 95 MG, depending on demand for reverse osmosis-treated effluent for other uses. Less frequent but wetter weather will result in higher discharge volume. For example, a 20-year design wastewater overflow event is estimated to result in a secondary effluent discharge of approximately 95 MG and a discharge of up to 95 MG reverse osmosis-treated effluent, depending on demand. Discharge Prohibition A.4 prohibits discharges to Alamo Canal from wastewater flow events more frequent than once in 20 years. Immediately after Project implementation, discharge to Alamo Canal is not expected, since sufficient LAVWMA pipeline capacity will exist and all wastewater will be transported to the EBDA system and the San Lorenzo Creek discharge location. As planned growth occurs after Project implementation, the potential for discharge at Alamo Canal increases. After Project implementation, discharge is expected to be less frequent than one event in 20 years.

BASIN PLAN

10. The Board adopted a revised Water Quality Control Plan for the San Francisco Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office Administrative Law on July 20 and November 13, 1995. The Basin Plan identifies beneficial uses and water quality objectives for waters of the State, including surface and ground waters, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.

11. The beneficial uses of San Lorenzo Creek, Alamo Canal and Lower San Francisco Bay are:

<u>San Lorenzo Creek</u>

a. Water contact recreation
b. Non-contact water recreation
c. Wildlife habitat
d. Warm and Cold Fresh Water Habitats
e. Fish migration and spawning
f. Groundwater recharge
g. Fresh water replenishment
h. Municipal and domestic supply

<u>Alamo Canal</u> (the Basin Plan does not distinguish between beneficial uses of Alameda Creek and its tributary Alamo Canal)

a. Agricultural Supply.
b. Cold Freshwater Habitat.

c. Groundwater Recharge.
d. Fish Migration.
e. Water Contact Recreation.
f. Non-contact Recreation.
g. Fish Spawning.
h. Warm Freshwater Habitat.
h. Wildlife Habitat.

San Francisco Bay

a. Industrial service supply
b. Navigation
c. Water contact recreation
d. Non-contact water recreation
e. Commercial and sport fishing
f. Wildlife habitat
g. Preservation of rare and endangered species
h. Fish spawning and migration
i. Shellfish harvesting
j. Estuarine habitat

13. The Basin Plan contains a prohibition of discharge of any wastewater which has particular characteristics of concern to beneficial uses into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof.

14. The Basin Plan allows exceptions to this discharge prohibition in three cases:

    a. an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or

    b. a discharge is approved as a part of a reclamation project; or

    c. it can be demonstrated that net environmental benefits will be derived as a result of the discharge.

15. An exception based on finding 14.a. is justified for the following reasons:

    a. A habitat study performed by the discharger has shown that the discharge as proposed will meet the beneficial use concerns of the California Department of Fish and Game and the Regional Board.

b. The discharge as proposed will be intermittent.

c. The discharger's system and its tributary wastewater treatment plants provide reliable and adequate secondary treatment of wastewater.

d. Further reduction of wet weather discharges would involve expanding EBDA pipeline, adding flow equalization beyond what is proposed in the Project and other facilities. Implementation of such additional measures would place an inordinate financial burden on the discharger.

BASIS FOR PERMIT LIMITS

16. The reasonable potential analysis using the method described in EPA's 1994 *Guidance for NPDES Permit Issuance, Appendix A: Establishing Reasonable Potential* identified constituents in wastewater that have the potential to cause or contribute to an excursion above water quality standards. Applicable water quality objectives from the Basin Plan and the National Toxics Rule (40 CFR 131, July 1993) were the basis of the reasonable potential analysis.

17. This Order serves as an NPDES permit, reissuance of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

18. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.

19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastewater at any point where it does not receive: a) a minimum initial dilution of 10:1; b) into a non-tidal water; or, c) into dead-end slough and similar confined waters is prohibited, except as defined below. Based on Findings 14 and 15, an exception to this prohibition 1.b. is granted for the discharge of secondary-treated effluent and reverse osmosis-treated effluent during the wet weather season, as described in Findings 7 and 9 of this Order. Discharge of secondary-treated effluent or reverse osmosis-treated effluent at a location or in a manner different from that described in the findings of this Order is prohibited.

2. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the dechlorination facility or from any of the joint facilities or the discharger export

system and pump stations during wet weather (October 15 through April 15) is prohibited.

3. Discharge during dry weather is prohibited.

4. Discharge to Alamo Canal is prohibited unless wastewater flow exceeds a 20-year design wastewater flow event.

5. Discharge to waters of the State is prohibited except as defined below. The discharger shall design and construct LAVWMA Export Pipeline Facilities to achieve a) long term average discharge frequency of no more than one event in 5 years to San Lorenzo Creek and b) long term average discharge frequency of no more than one event in 20 years to Alamo Canal. The discharger shall prepare a LAVWMA Wet Weather Facilities Operation Plan which is shall be consistent with the following objectives:

   a. The average daily discharge to San Lorenzo Creek shall not exceed 21.5 mgd and shall be limited to flow in excess of available EBDA capacity.

   b. Discharge to Alamo Canal shall occur only after EBDA capacity, San Lorenzo Creek discharge capacity and equalization storage capacity are fully utilized as defined in the Wet Weather Facilities Management Plan as described in Provision D.8.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituents	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Total Suspended Solids	mg/l	---	---	60	---
b. Settleable Matter	ml/l-hr	---	---	0.2	---
c. Total Chlorine Residual[(1)]	mg/l	---	---	---	0.00
d. Carbonaceous BOD	mg/l	---	---	50	---
e. Oil and Grease	mg/l	---	---	20	---

(1) Requirement defined as below the limit of detection in the latest edition of "Standard Methods for the Examination of Water and Wastewater."

2. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

3. Value for the Most Probable Number (MPN) of total coliform bacteria in any single sample shall not exceed 1,000 MPN/100 ml which is expected value in receiving waters. The operational goal for the discharges shall be 240 MPN/100 ml.

4. Acute Toxicity:

   The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent

limitations are defined as follows:

11 sample median:	A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.
90^{th} percentile:	A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

5. Concentration Limits for Toxic Pollutants: The effluent shall not exceed the following limits (a)(c): (see Table 1 and 2 footnotes):

Alamo Canal Discharge:

Table 1
(All limits in µg/l)

Constituent	Month Average(b)	Daily Average(b)
1. Lead (d)	---	5.6
2. Mercury(d)	---	0.12

San Lorenzo Creek Discharge:

Table 2
(All limits in µg/l)

Constituent	Month Average(b)	Daily Average(b)
1. Mercury(d)	---	0.12

Footnotes:

a. These limits are based on fresh water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
b. Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).
c. All analysis shall be performed using current USEPA Methods, as specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", SW-846, Third Edition. Detection limits, practical quantitative levels, and limits of quantitative will be taken into account in determining compliance with effluent limitations.

d. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of 24-hour composite samples shall be reported, as well as the average four.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved Oxygen	5.0 mg/l, minimum
b.	Dissolved Sulfide	0.1 mg/l, maximum
c.	pH	Variation from normal ambient pH by more than 0.5 pH units.
d.	Un-ionized Ammonia	0.4 mg/l as N, maximum

3. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Board or the State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 96-009 adopted on January 17, 1996. Order No. 96-009 is hereby rescinded.

2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

Mass Emission Limit in lb./day = Concentration Limit in mg/l × 8.34 × Actual Flow in MGD averaged over the time interval to which the limit applies.

3. The discharger shall comply with all sections of this Order immediately upon adoption.

4. Compliance with Acute Toxicity Effluent Limitation

   a. Compliance with Effluent Limitation B.4. (Acute Toxicity) of this Order shall be evaluated by measuring survival of test organisms acceptable to the Executive Officer exposed to undiluted effluent for 96 hours in flow-through bioassays.

   b. All bioassays shall be performed according to protocols approved by the USEPA or State Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.

5. The discharger shall comply with the Self-Monitoring Program for this order, as adopted by the Board and as may be amended by the Executive Officer.

6. Annually, the discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

7. The discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements " dated August 1993, or any amendments thereafter.

8. The discharger shall review, and update as necessary, its Operations and Maintenance Manual by January 5, 2000, to include a Wet Weather Facilities Management Plan that optimizes the use of storage and discharge facilities such that Discharge Prohibition A.4 and A.5. are attained. The Wet Weather Facilities Management Plan shall be developed with input from Alameda County Water District (ACWD) to assure that Alamo Canal discharge is minimized and coordinated with ACWD operations. This management plan must be submitted to the Board prior to start-up of the wet weather facilities. The plan will be subject to the Executive Officer's review and approval. The discharger's compliance with the operation plan will constitute compliance with this prohibition. Conversely, failure to comply with the plan will connote non-compliance with this prohibition. The operation plan may be part of the discharger's Operation and Maintenance Manual.

   The Operations and Maintenance Manual shall thereafter be reviewed and updated annually, or within 90 days of completion of any significant facility or process changes. The discharger shall submit to the Board, by April 15 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

9. The Board may modify, or revoke and reissue, this Order and Permit if present or future

investigations demonstrate that the discharge governed by this Order is causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

10. This Order expires on May 25, 2004. The discharger must file a report of waste discharge not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.

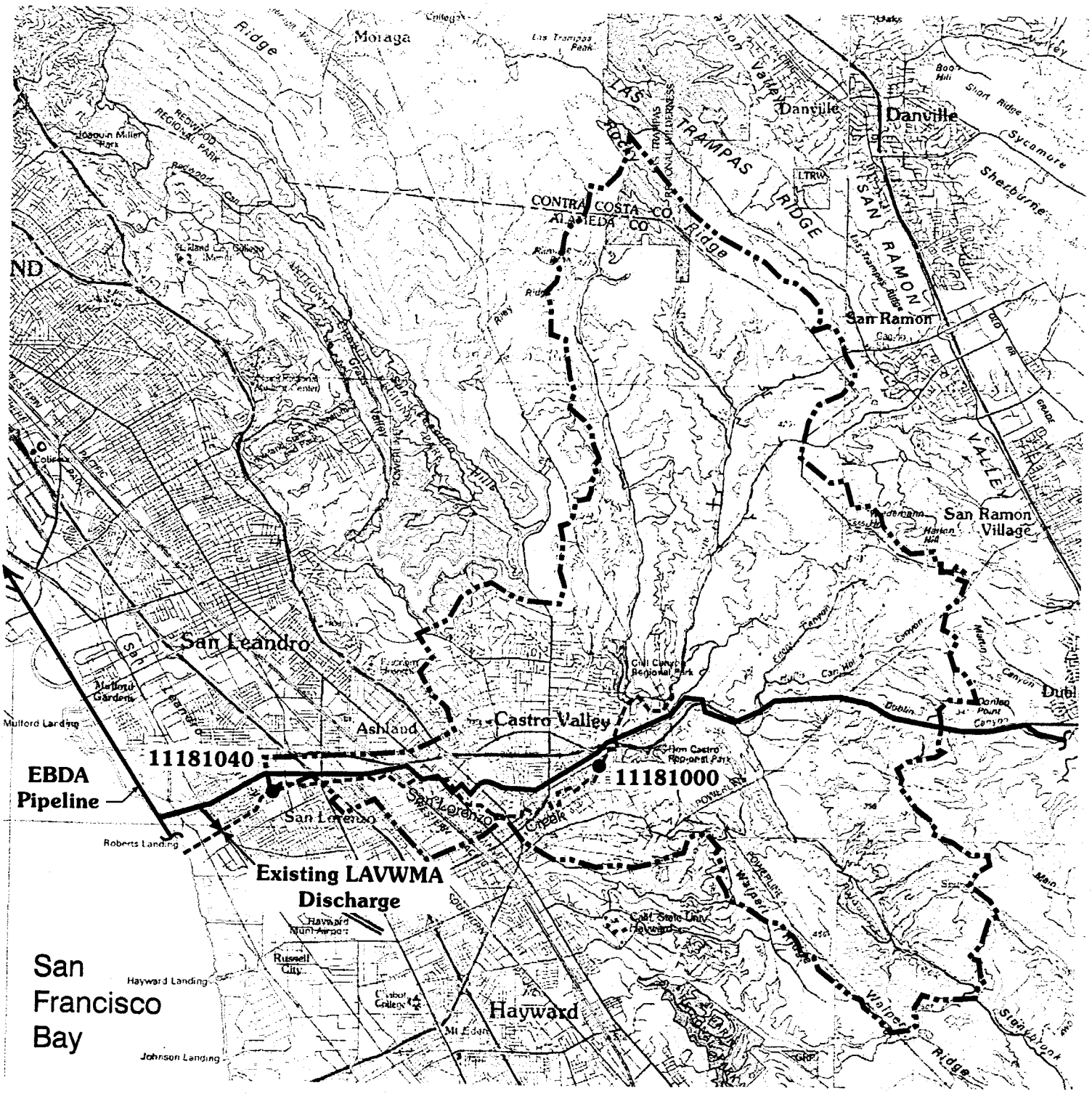
11. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 25, 1999.

LORETTA K. BARSAMIAN
Executive Officer

Attachments:

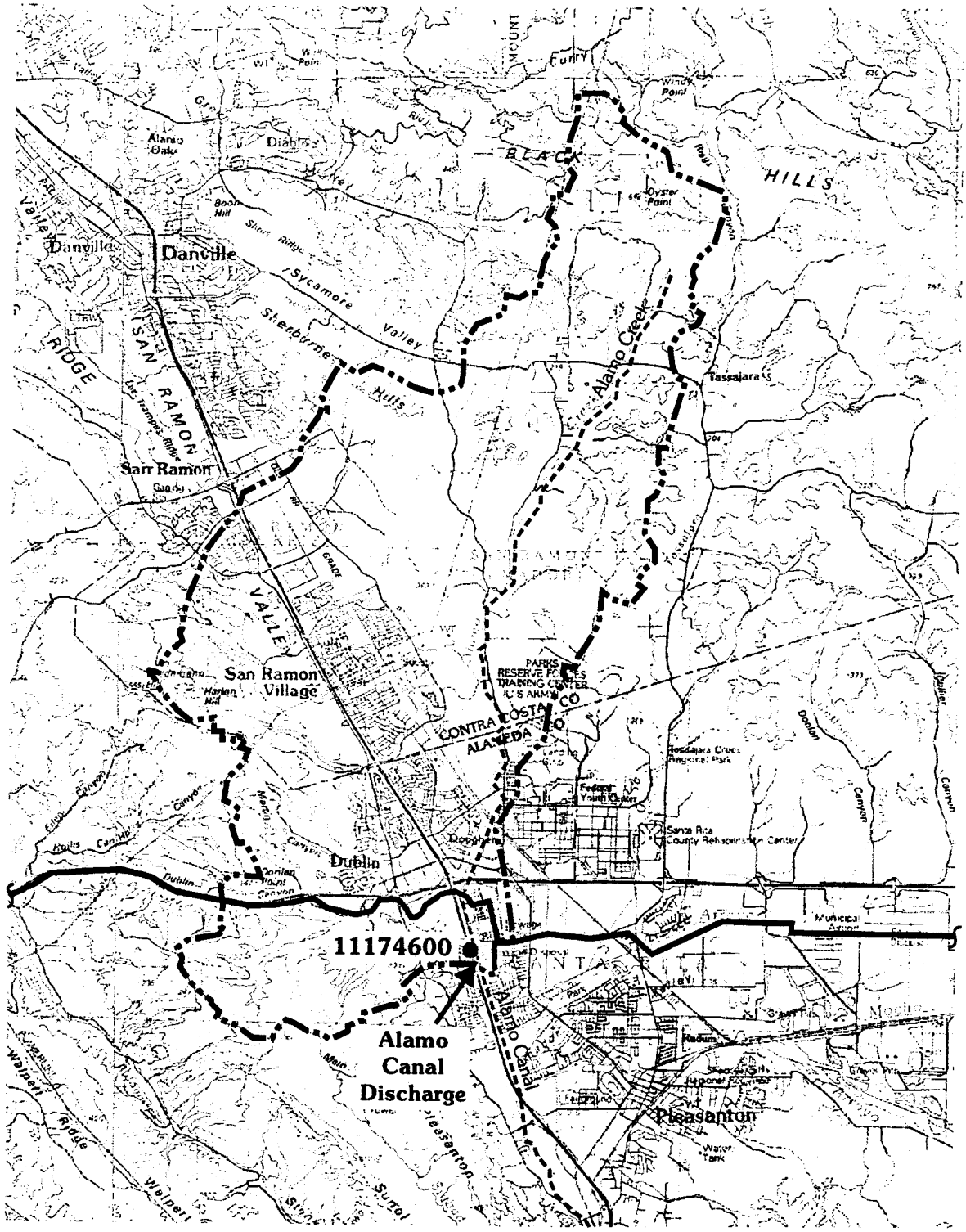
Self-Monitoring Program
Standard Provisions and Reporting Requirements - August 1993
Resolution No. 74-10



LEGEND

- USGS Gauging Station
- LAVWMA Export Facilities
- Watershed
- Receiving Water

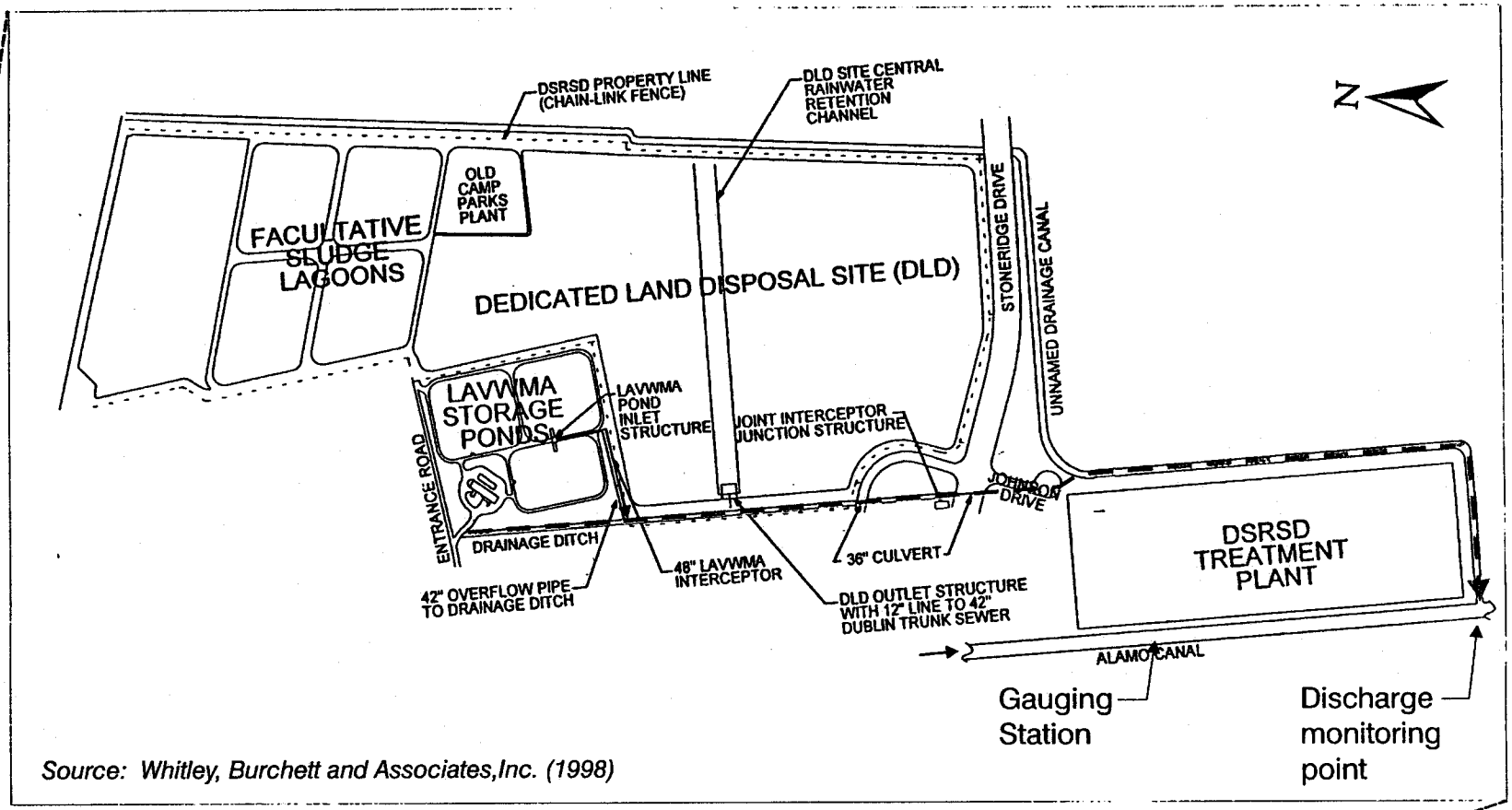
SAN LORENZO CREEK WATERSHED
LIVERMORE AMADOR VALLEY
WATER MANAGEMENT AGENCY



LEGEND

- USGS Gauging Station
- LAVWMA Export Facilities
- Watershed
- Receiving Water

ALAMO CANAL WATERSHED
LIVERMORE AMADOR VALLEY
WATER MANAGEMENT AGENCY



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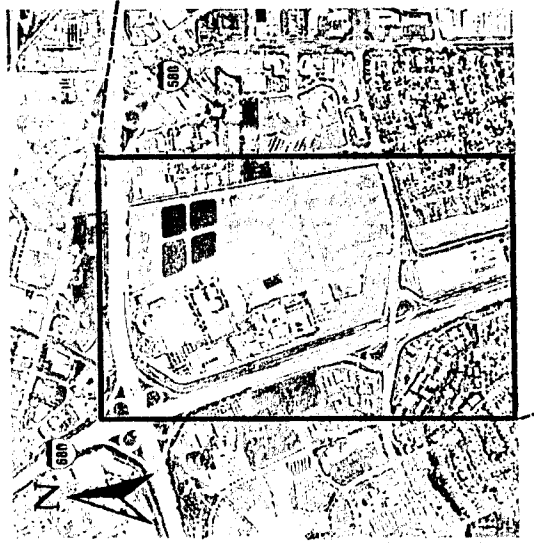
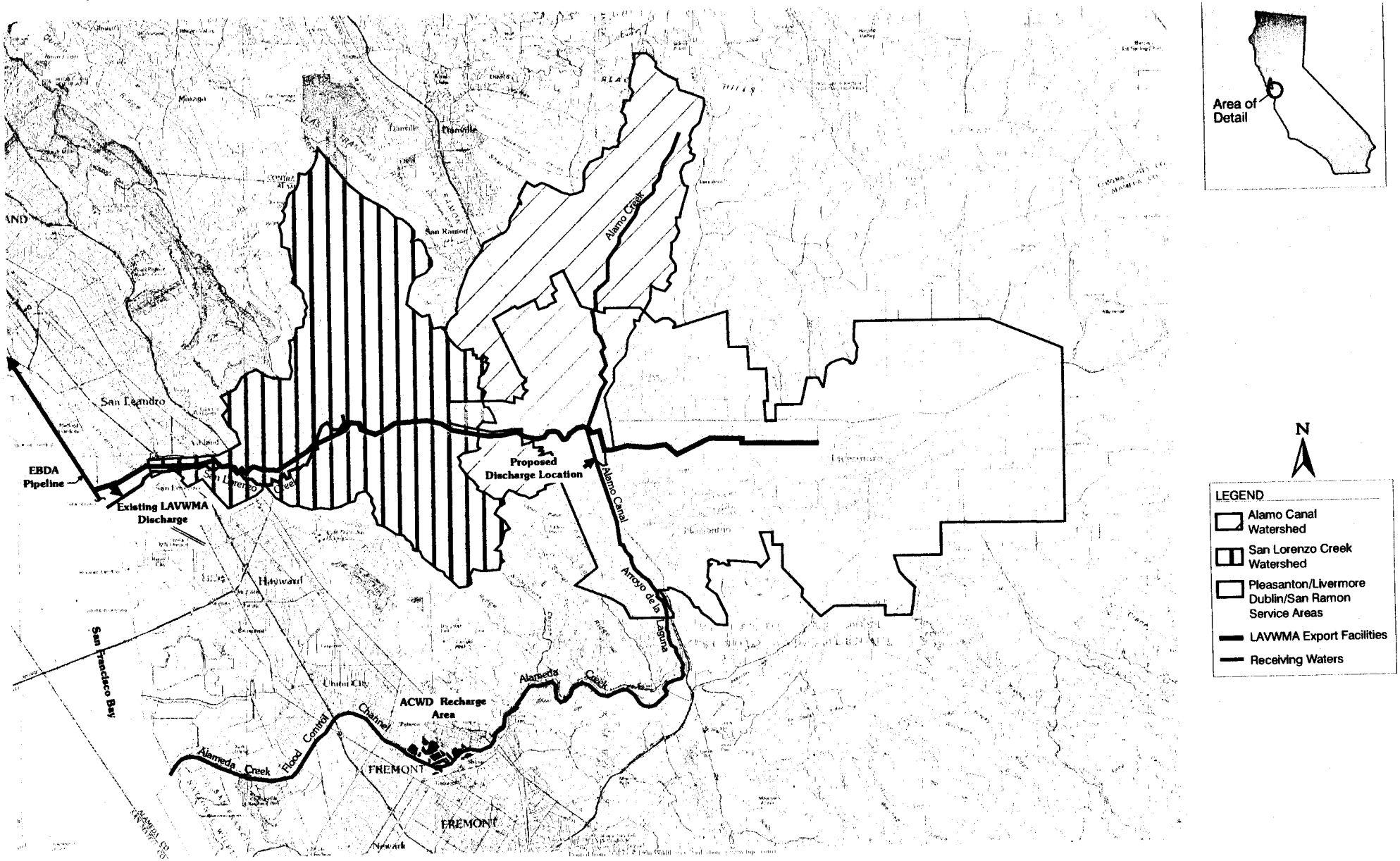


DISCHARGE TO ALAMO CANAL
LIVERMORE AMADOR VALLEY
WATER MANAGEMENT AGENCY



GENERAL LOCATION MAP
LIVERMORE AMADOR VALLEY
WATER MANAGEMENT AGENCY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
SAN LORENZO CREEK AND ALAMO CANAL
INTERMITTENT WET WEATHER DISCHARGES
SAN LEANDRO AND PLEASANTON, ALAMEDA COUNTY

NPDES NO. CA0038679
ORDER NO. 99-023

CONSISTING OF
PART A, DATED AUGUST 1993
AND PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At any point in the discharger's system facilities at which adequate disinfection and dechlorination has taken place and prior to the point of discharge to San Lorenzo Creek.
E-002	At any point in the discharger's system facilities at which adequate disinfection and dechlorination of secondary effluent has taken place and prior to the point of discharge to Alamo Canal.
E-003	At any point in the discharger's system facilities at which adequate disinfection and dechlorination of reverse-osmosis treated effluent has taken place and prior to the point of discharge to Alamo Canal.

B. RECEIVING WATERS

San Lorenzo Creek

Station	Description
C-1	At a point located 100 feet upchannel from the discharge point.
C-2	At a point located 100 feet downchannel from the discharge point.
C-3	Reference station located ½ mile upchannel and/or out of the discharge's zone of influence.

Alamo Canal

Station	Description
C-4	At a point located 100 feet upchannel from the discharge point.
C-5	At a point located 100 feet downchannel from the discharge point.

C-6	Reference station located ½ mile upchannel and/or out of the discharge's zone of influence.

C. LAND OBSERVATIONS

Station	Description
P-1 through P-n	Located at the corners and midpoints of the perimeter fenceline surrounding each of the San Lorenzo Creek dechlorination facility and the Alamo Canal dechlorination facility.

D. OVERFLOWS AND BYPASSES

Station	Description
O-1 through O-n	Bypass or overflows from manholes, pump stations, interceptors, or collection system.

NOTE:

1. A map and description of each known or observed overflow or bypass location shall accompany each monthly report. A summary of these occurrences and their locations shall be included with the Annual Report for each calendar year.

II. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observation shall be that given in Table 1.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 99-.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be authorized by the Executive Officer.

3. Is effective on May 25, 1999.

Loretta K Barsamian
LORETTA K. BARSAMIAN
Executive Officer

Attachment:
A. Table 1

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS
ORDER NO. 99-023

Sampling Station	E-001, E-002, E-003			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C	G	Cont.	G	O	O
Flow Rate (mgd)			E			
BOD, 5-day, 20°C, or COD (mg/l & Kg/day)	E					
Chlorine Residual and Dosage (mg/l & Kg/day) (3)			E			
Settleable Matter ml/l-hr. & ft^3/day)		E				
Total Suspended Matter (mg/l & Kg/day)	E					
Oil & Grease (mg/l & Kg/day)		E				
Coliform (Total or Fecal) (1) (MPN/100 ml) per req't		E				
Acute Fish Toxicity, 96-hr. (% survival) (6)	E					
Ammonia Nitrogen (mg/l & Kg/day) (2)	E					
Nitrite Nitrogen (mg/l & Kg/day) (2)	E					
pH (Units)		E		E		
Dissolved Oxygen (mg/l and % saturation)		E		E		
Temperature (°C)		E		E		
Sulfides (if DO<5.0 mg/l) Total and Dissolved (mg/l)		E		E		
Arsenic (µg/l & Kg/day) (5)	C-X					
Cadmium (µg/l & Kg/day) (5)	C-X					
Chromium, Total (µg/l & Kg/day) (5)	C-X					
Copper (µg/l & Kg/day) (5)	C-X					

Sampling Station	E-001, E-002, E-003			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C	G	Cont.	G	O	O
Cyanide (µg/l & Kg/day) (5)	C-X					
Silver (µg/l & Kg/day) (5)	C-X					
Lead (µg/l & Kg/day) (5)	C-X					
Mercury (µg/l & Kg/day) (5)	C-X					
Nickel (µg/l & Kg/day) (5)	C-X					
Selenium (µg/l & Kg/day) (5)	C-X					
Zinc (µg/l & Kg/day) (5)	C-X					
Phenolic Compounds (µg/l & Kg/day) (5)	C-X					
PAHs (µg/l & Kg/day) (5)	C-X					
All Applicable Standard Observations		E		E	D	D
Un-ionized Ammonia (mg/l) (2)		E		E		
Dilution Ratio Estimate (4)		E				

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C = composite sample over duration of event
Cont. = continuous sampling
O = observation

TYPES OF STATIONS

E = waste effluent stations
C = receiving water stations
L = basin and/or pond levee stations
P = treatment facilities perimeter stations

FREQUENCY OF SAMPLING

C-X = Composite sample (1/hour) over X hours (the duration of the discharge)

E = each occurrence
H= once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = twice per year
Q = quarterly, once each in Mar., June, Sept., & Dec.

2H = every 2 hours
2D = every two days
2W = every two weeks
2M = every two months
Cont. = continuous

TABLE 1 FOOTNOTES

(1) Sampling and compliance with the Total Coliform effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. A letter requesting the above modification in sampling requirements shall be submitted to the Executive Officer. Coliform data for the plant shall be submitted with the discharger's report for the appropriate sampling days.

(2) Ammonia nitrogen, nitrite nitrogen, and unionized ammonia shall be analyzed with the same composite samples used for the fish bioassay test.

(3) Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

(4) Minimum and maximum dilution ratios (effluent vs. channel flow) shall be calculated for each day of discharge. The concentration of un-ionized ammonia at receiving water stations may be calculated using methodology approved by the Executive Officer.

(5) Sampling and compliance with the various metallic, phenolic, and Polynuclear Aromatic Hydrocarbon effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. Results shall be reported with the self-monitoring report.

(6) Fish Toxicity shall be determined using 96-hour static bioassays representative of the discharged effluent. One species shall be three-spined stickleback, and the other shall be either rainbow trout or fathead minnow. Effluent used for fish bioassays must be undiluted and dechlorinated.

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS
ORDER NO. 99-023

Sampling Station	E-001, E-002, E-003			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C	G	Cont.	G	O	O
Flow Rate (mgd)			E			
BOD, 5-day, 20°C, or COD (mg/l & Kg/day)	E					
Chlorine Residual and Dosage (mg/l & Kg/day) (3)			E			
Settleable Matter ml/l-hr. & ft^3/day)		E				
Total Suspended Matter (mg/l & Kg/day)	E					
Oil & Grease (mg/l & Kg/day)		E				
Coliform (Total or Fecal) (1) (MPN/100 ml) per req't		E				
Acute Fish Toxicity, 96-hr. (% survival) (6)	E					
Ammonia Nitrogen (mg/l & Kg/day) (2)	E					
Nitrite Nitrogen (mg/l & Kg/day) (2)	E					
pH (Units)		E		E		
Dissolved Oxygen (mg/l and % saturation)		E		E		
Temperature (°C)		E		E		
Sulfides (if DO<5.0 mg/l) Total and Dissolved (mg/l)		E		E		
Arsenic (µg/l & Kg/day) (5)	C-X					
Cadmium (µg/l & Kg/day) (5)	C-X					
Chromium, Total (µg/l & Kg/day) (5)	C-X					
Copper (µg/l & Kg/day) (5)	C-X					